

EXCERPTA MEDICA Sec 4 Vol 12/2 Med. Micro. Feb 59

560. STREPTOMYCIN RESISTANCE AND STREPTOMYCIN DEPENDENCE OF  
MYCOBACTERIUM TUBERCULOSIS (Russian text) - Khoma-Lemishko  
A. M. - ANTIBIOTIKI 1958, 3/1 (110-111) Tables 1  
Primary resistance was established in 8.5% of 218 cases of pulmonary tb. In 1.8%  
of the patients streptomycin-dependent tubercular bacteria were cultured.  
(IV, 15, 17)

1. L'vovskiy nauchno-issledovatel'skiy institut tuberkuleza.

KHOMA-LEMISHKO, A.M.

Influence of antibacterial preparations on peroxidase in myobacteria.  
Antibiotiki 5 no.3:73-74 My-Je '60. (MIRA 14:6)

1. L'vovskiy nauchno-issledovatel'skiy institut tuberkuleza.  
(MYCOBACTERIUM TUBERCULOSIS) (PEROXIDASE)

KHOMA-LEMISHKO, A.M.

Effect of antibacterial preparations on indophenoloxidase in  
Mycobacterium. Zhur.mikrobiol.epid.i immun. 32 no.3:108-110  
Mr '61. (MIRA 14:6)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta tuberkuleza.  
(OXIDASE) (MYCOBACTERIUM)

KHOMA-LEMISHKO, A.M., starshiy nauchnyy sotrudnik

Pigmented mycobacteria in clinical tuberculosis. Probl.tub.  
39 no.3:93-98 '61. (MIRA 14:5)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - kand.med.nauk G.I. Chemeris, nauchnyy rukovoditel' - prof. I.T. Stukalo).

(MYCOBACTERIUM TUBERCULOSIS)

KHOMA-LEMISHKO, A.M.

Critical remarks of R.O. Drabkina, A.A. Klebanova, B.Ia. Stukalova and N.N. Makarevich regarding the article "Pigmented mycobacteria in the clinical picture of tuberculosis". Probl. tub. no.7:66-69 '63. (MIRA 18:1)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta tuberkuleza (direktor - kand. med. nauk G.I. Chemeris, zamistitel' direktora po nauchnoy chasti - prof. I.T. Stukalo).

CHERTKOVA, M.A.; KHOMA-LEMISHKO, A.M.

Content of nucleic acid in drug-sensitive and resistant  
mycobacteria. Zhur. mikrobiol., epid. i immun. 40 no.4:  
31-35 Ap '63. (MIRA 17:5)

1. Iz L'vovskogo nauchno-issledovatel'skogo tuberkuleznogo in-  
stituta.

KHOPERIYA, T.N.; KHOMASURIDZE, Zh.P.

Electroless nickel plating of metals. Soob. AN Gruz. SSR 34  
no.1:91-98 Ap'64 (MIRA 17:7)

1. Tbilisskiy nauchno-issledovatel'skiy elektrotekhnicheskii  
institut. Predstavleno akademikom R.I. Agladze.

L 40320-66 EMI(m)/STP(j)/T IJP(c) RM/AM

ACC NR: AP6019448 (A) SOURCE CODE: UR/0303/66/000/003/0037/0038

AUTHOR: Khomat, I.; Balakirev, A. A.; Zhebrovskiy, V. V.

ORG: none

TITLE: Some properties of coatings with epoxy and urethane resins

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 3, 1966, 37-38

TOPIC TAGS: ~~coating~~, enamel coating, polyurethane<sup>resin</sup>, ~~polyurethane~~<sup>specialized</sup> coating, ~~resin~~, epoxy resin, elasticity, hardness

ABSTRACT: A comparative study has been made of some properties of enamel coatings made with E-33, E-41, and E-10 epoxy resins against polyurethane coating with a UR-930<sup>resin</sup> varnish base. It has been established that coatings made with E-10 resin were more resistant to dichloroethane. Enamel coatings with E-33 and E-41 resin base were found to have lower vapor permeability than polyurethane coatings. All coatings tested have shown a good metal-adhesion property. The enamel coating with an E-10 resin base was found to have a high degree of hardness but lower

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ACC NR: AP6019448

elasticity as compared to other coatings. The E-33 resin-base coating has shown a higher degree of hardness combined with high elasticity. Tests with laboratory-type artificial-weather apparatus on naturally drying epoxy-urethane coatings have shown high resistance under test conditions. Orig. art. has: 2 figures and 4 tables. [Based on authors' abstract] [AM]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: none/

Card 2/2 *MLP*

Khomatov, A.M.

USSR!

✓ Synthesis of substituted and high-molecular compounds.  
 22. Copolymerization of methacrylic acid and of methyl methacrylate  
 with vinyl esters. M. F. Shatalovskii and A. M. Khomatov  
 (Izv. Akad. Nauk SSSR, Otdel. Khim. Nauk, 1958, 921-923)  
 Solid copolymers, mol. wt.  $> 2285$ , are obtained in small yield from  
 $CH_2=CH-CO_2R$  ( $R = H$  or  $Me$ ) and  $CH_2=CH-OPh$  (40-60 hr. at  
 60°, with  $BeCl_2$  as initiator.) R. Tauson.

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1

S/073/60/026/001/017/021  
B004/B054

AUTHORS: Komlev, A. I. and Khomatskaya, A. A.

TITLE: Separation of Some Cations of Group III From Their Mixture  
by Means of Ion-exchange Chromatography

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 1,  
pp. 113-116

TEXT: The authors studied the chromatographic separation of mixtures of  $\text{Fe}^{3+}$  and  $\text{Ni}^{2+}$ ,  $\text{Fe}^{3+}$  and  $\text{Mn}^{2+}$ ,  $\text{Fe}^{3+}$  and  $\text{Co}^{2+}$  on cation exchangers of Soviet origin: CEC-1 (SBS-1), ekspatit-1 KY-1 (KU-1), and KY-2 (KU-2). They used columns 20-25 cm high and 6-7 mm in diameter, filled with 5 g of ionless exchanger. The dissolved mixture was passed through at a rate of 1 drop per 2-3 sec. As SBS-1 and KU-1 reduce  $\text{Fe}^{3+}$ , 5-6 ml of 3%  $\text{H}_2\text{O}_2$  was added to the solutions. On the other hand, SBS-1 and KU-1 resin is destroyed by repeated action of  $\text{H}_2\text{O}_2$ . KU-2, however, is affected by ammonia. The absorption energy of cations of group III on SBS-1 was determined by a known method (Ref. 6); the following was found:  $\text{Ni}^{2+} \leq \text{Co}^{2+} < \text{Mn}^{2+} < \text{Zn}^{2+}$

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Separation of Some Cations of Group III From Their S/073/60/026/001/017/021  
Mixture by Means of Ion-exchange Chromatography B004/B054

$\langle \text{Fe}^{3+} \rangle \langle \text{Al}^{3+}$ . Nickel was separated from iron by eluting  $\text{Ni}^{2+}$  with 1 N NaCl with addition of  $\text{H}_2\text{O}_2$ .  $\text{Fe}^{3+}$  is not eluted, and can finally be displaced from the column by means of 2 N HCl. The following average analytical data are indicated: 92.9% of the  $\text{Ni}^{2+}$  portion were eluted from SBS-1; 96.8% from KU-1. KU-2 resin must be previously treated with  $\text{NH}_3$  to permit an elution of  $\text{Ni}^{2+}$  (95.9%), with no  $\text{Fe}^{3+}$  passing into the filtrate. Separation of  $\text{Mn}^{2+}$  from  $\text{Fe}^{3+}$  is possible with the use of SBS-1 or KU-1 resin by elution with 1 N NaCl +  $\text{H}_2\text{O}_2$  (97.5-99.5%). Separation is impossible with KU-2. Separation of  $\text{Co}^{2+}$  from  $\text{Fe}^{3+}$  was impossible with the resins mentioned. The accuracy of separation of  $\text{Ni}^{2+}$  and  $\text{Mn}^{2+}$  from  $\text{Fe}^{3+}$  is not affected by the  $\text{Ni}^{2+} : \text{Fe}^{3+}$ , and  $\text{Mn}^{2+} : \text{Fe}^{3+}$ , ratio in the range of from 1:1 to 1:50. Ye. B. Trostyanskaya is mentioned. There are 1 figure, 4 tables, and 6 references: 4 Soviet, 1 German, and 1 Polish.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Iv. Franko (L'vov State University imeni Iv. Franko)

SUBMITTED: December 3, 1959

Card 2/2

NIKOLAYEV, A.V.; GINDIN, L.M.; ZAKHAROV, V.F.; KHCMAVKO, I.A.

Hydrometallurgical method of treating Khovu Aksy cobalt-nickel  
arsenate concentrates. TSvet. met. 38 no. 12:44-46 D '65  
(MIRA 19:1)

VEKSLER, Yu.F., kand.ekonomicheskikh nauk; OBUKHOVSKIY, V.M., kand.  
ekonomicheskikh nauk; Prinimali uchastiye: KUTUZOVA, N.,  
KHOMAYUN, Kh.

- Size of state vegetable-potato farms in Moscow Province.  
Izv. TSKHA no.3:185-197 '62. (MIRA 15:9)

1. Sotrudniki Laboratorii ekonomicheskikh issledovaniy  
Timiryazevskoy sel'skokhozyaystvennoy akademii (for Kutuzova,  
Khomayun).

(Moscow Province—State farms)  
(Moscow Province—Vegetable gardening)

L 29719-66 EEC(k)-2/EWP(k)/ENT(1)/FBD/T IJP(c) WG/GW  
ACC NR: AP6016918 SOURCE CODE: UR/0006/66/000/005/0009/0015

AUTHOR: Golobov, V. V.; Gordeyev, D. V.; Ostapchenko, Ye. P.; Perebyakin, V. A.; Khomaza, V. F. 69  
B

ORG: none

TITLE: Possible use of gas <sup>25</sup>lasers in high-precision <sup>12</sup>measurements of distances

SOURCE: Geodeziya i kartografiya, no. 5, 1966, 9-15

TOPIC TAGS: <sup>GAS LASER</sup>optic range finder, <sup>LASER APPLICATION</sup>~~laser range finder~~ SC-2M OPTIC RANGE FINDER,  
LG-55 <sup>GAS LASER</sup>

ABSTRACT: The authors describe experiments in which the light source of a precision optical range finder (SC-2M) was replaced by a small gas laser. The purpose of the experiment was to increase the accuracy of distance measurements with such a range finder and to permit its use under daylight conditions. Another advantage of the laser is that it delivers a beam of much narrower spectral width. The gas was a mixture of helium and neon operating at 6328 Å and delivering not less than 1 mW. The measurements were made of distances of the order of 3 km in sunlight and during twilight. In daylight, when the ordinary light source could not be used, the mean square measurement accuracy was ±2.4 mm, and in twilight, ±1.3 mm. Equipping the range finder with a laser approximately doubled the maximum distance measurable at night. The requirements that must be satisfied by the laser are specified, and it is found that the LG-55 developed by one of the MEK SSSR enterprises is the most suitable for this purpose.

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UDC: 528.021.7 - 187.4: 621.378.325

L 29719-66

ACC NR: AP6016918

The specifications of this laser are listed. It is concluded that the development of optical range finders with gas lasers offers distinct advantages. Orig. art. has: 3 figures, 3 formulas, and 2 tables. [02]

SUB CODE: 7,20/ SUBM DATE: 00/ ATD PRESS: 5613

Card 2/2 CC



KHOMAZYUK, A. I.

"The Role of the Nervous System in the Mechanism of Osmotherapy and Glucose Therapy." Cand Med Sci, Dnepropetrovsk Medical Inst, Ministry Health Ukrainian SSR, Dnepropetrovsk, 1954. (KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

USSR/Medicine - Physiology

FD-2504

Card 1/1 Pub 17-3/20

Author : Khomazyuk, A. I.

Title : On the role of the nervous system in the mechanism of osmo- and glucose therapy. Report I: Reflex changes in blood pressure on injection of concentrated solutions of glucose into the blood stream.

Periodical : Byul. eksp. biol. i med. 4, 11-16, Apr 1955

Abstract : Investigated the effects on blood pressure of concentrated (40%) solutions of glucose on being injected into the blood stream of dogs. Graphs. Nine references, 8 of them USSR (6 since 1940).

Institution : Chair of Pathologic Physiology (Head - Dotsent I. N. Sukhotepleyy) of the Dnepropetrovsk Medical Institute (Director - Dotsent D. P. Chukhrienko)

Submitted : March 10, 1954 by V. N. Chernigovskiy, member of the Academy of Medical Sciences USSR

USSR/Medicine - Neurotherapy

KHOMAZYUK, A. I.

FD-3384

Card 1/1 Pub. 17 - 8/22

Author : Khomazyuk, A. I.

Title : Role of the nervous system in the mechanism of glucose therapy and osmotherapy. Part II: Mechanism of excitation of interoceptors during introduction of concentrated solutions of certain substances into the blood vessels

Periodical : Byul. eksp. biol. i med. 8, 35-39, Aug 1955

Abstract : Author wanted to clarify the role of molecular concentrations as irritants when injected into the blood stream. To dogs under anesthesia he gave intravenous injections of comparatively harmless substances in solutions which equaled a 40% glucose solution: 16% glucacola, 12% urea, 76% saccharose. To the controls he gave 40% glucose. Sodium chloride in 5 to 25% solutions was also used. Author illustrates the results from his experiments on graphs and concludes that isotonic solutions do not depend on composition but on molecular concentration for their effect. 10 references, 8 USSR, 7 since 1940. Graphs

Institution : Chair of Pathological Physiology (Head: Docent I. N. Sukhotepleyy)  
Dnepropetrovsk Medical Institute (Dir. Docent L. P. Chukhriyenko)

Submitted : 10 Mar 1954

KHOMAZYUK, A.I., kand.med.nauk

Third effector mechanism of the depressor reaction arising in  
excitation of the receptors of the lesser pulmonary circulation.  
Mat.po obm.nauch.inform. no.2;161-165 '58. (MIRA 13:6)

1. Iz otdela patologicheskoy fiziologii (sav. - A.I. Khomazyuk)  
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy  
meditsiny, Kiyev.

(BLOOD VESSELS--INNERVATION) (PULMONARY CIRCULATION)

KHOMAZYUK, A.I. (Kiyev)

Physiology and pathophysiology of the lesser circulation.

Vrach.delo no.5:483-488 My '58

(MIRA 11:7)

1. Otdel patologicheskoy fiziologii (zav. kand.med.nauk A.I.  
Khomazyuk) Ukrainskogo instituta klinicheskoy meditsiny im. akad.  
N.D. Strazhesko.

(BLOOD--CIRCULATION, DISORDERS OF)

KHOMAZYUK, A.I.; VIASYUK, V.M.

Renal plethysmograph. Biul. eksp. biol. med. 47 no.5:120-122 My '59.  
(MIRA 12:7)

1. Iz otdela patologicheskoy fiziologii (zav. - kand. med. nauk A.I. Khomazyuk) Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni N.D. Strazhesko (dir. - prof. A.L. Milhney), Kiyev.  
Predstavlena deystvitel'nyy chlenom AMN SSSR V.V. Parinyu.

(PLETHYSMOGRAPHY,  
renal plethysmograph (Rus))  
(KIDNEYS,  
same)

KHOMAZYUK, A.I.

Development and mechanism of blood pressure changes following intravascular administration of hypertonic solutions. Biul. eksp.biol. i med. 47 no.6:18-23 Je '59. (MIRA 12:8)

1. Iz otdela patologicheskoy fiziologii (zav. - kand.med.nauk A.I.Khomazyuk) Ukrainского instituta klinicheskoy meditsiny imeni akad.N.D.Strazhesko (dir. - prof.A.L.Mikhnev), Kiyev. Predstavlena deystvitel'nyy chlenom AMN SSSR V.V.Parinyu).

(HYPERTONIC SOLUTIONS, eff.

on blood pressure (Rus))

(BLOOD PRESSURE, physiol.

eff. of intravasc. infusion of hypertonic solutions (Rus))

KHOMAZYUK, A.I.; ZHDANENKO, V.G.; MOYBENKO, A.A.

Characteristics of the normal ECG in dogs. Fiziol. zhur. 46 no.3:  
347-351 Mr '60. (MIRA 14:7)

1. From the Experimental Physiology Department of the N.D.Stragesko  
Ukrainian Institute of Clinical Medicine, Kiyev.  
(ELECTROCARDIOGRAPHY)



KHOMAZYUK, A.I.; MOYBENKO, A.A.

Mode of action of acetylcholine on the pulmonary blood circulation.  
Biul. eksp. biol. i med. nq:2:3-9 F '61. (MIRA 14:5)

1. Iz otdela patofiziologii (rukovoditel' - kandidat meditsinskikh nauk A.I.Khomazyuk) Ukrainского nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni akademika N.D.Strazhesko (dir. - prof. A.L.Mikhnev), Kiyev, Predstavlena deystvitel'nyim chlenom AMN SSSR V.N.Chernigovskim.

(CHOLINE) (PULMONARY ARTERY)  
(BLOOD PRESSURE)

KHOMAZYUK, A. I., Doc MED SCI, "EXPERIMENTAL <sup>studies</sup> INVESTIGATIONS  
OF THE RECEPTION AND LESSER PULMONARY CIRCULATION." KIEV, 1961.  
(KIEV ORDER OF LABOR RED BANNER MED INST IMENI A<sup>C</sup>AD A. A. BO-  
GOMOLETS). (KL-DV, 11-61, 226).

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KHOMAZYUK, A.I.

Multichannel water-mercury manometer. Biul. eksp. biol. i med.  
51 no.6:107-110 Je '61. (MIRA 15:6)

1. Iz otdela patologicheskoy fiziologii (rukovoditel' - starshiy  
nauchnyy sotrudnik A.I. Khomazyuk) Ukrainskogo nauchno-issledovatel'-  
skogo instituta klinicheskoy meditsiny imeni akademika N.D.  
Strazhesko (dir. - prof. A.L. Mikhnev), Kiyev.  
(MANOMETER)

KHOMAZYUK, A.I.

Reflex reactions in experimental cardiac pathology. Trudy  
Inst. klin. i eksper. kard. AN Gruz. SSR 8s427-430 '63.  
(MERA 1787)

1. Otdel patofiziologii Ukrain'skogo Instituta klinicheskoy  
meditsiny, Kiev.

MIKHNEV, A.L.; KHOMAZYUK, A.I.; KOCHEMASOVA, N.G.; KUZ'MINSKIY, N.P.;  
SMIRNOVA, N.S.; NESHCHERET, A.P.

Disorders in circulatory regulation in experimental  
atherosclerosis in dogs. Trudy Inst. klin. i eksper. kar .  
AN Gruz. SSR 8:181 186 '63. (MIRA 17:7)

1. Ukrainskiy institut klinicheskoy meditsiny imeni akademika  
N.D.Strazhesko, Kiyev.

KHOMAZYUK, A.I.

Kymographic recording of the saturation of blood with oxygen using a flow-cuvette and O-36 oxyhemograph. Fiziol. zhur [Ukr.] 8 no.4: 551-553 J1-Ag '62. (MIRA 18:4)

1. Otdel patologicheskoy fiziologii Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny im. akad. Strazhesko, Kiyev.

~~KHOMAZHUK, Vasiliz, Grigor'evich;~~ TARUSOV, B.N., prof., obshchiy red.;  
LISVIN, V.S., red.; LIPKINA, T.G., red.izd-va; TITOVA, L.L.,  
tekh.n.red.

[Practical work in general biophysics in 8 parts] Praktikum  
po obshchei biofizike v vos'mi vypuskakh. Moskva, Gos.izd-vo  
"Sovetskaya nauka." Pt.2. [Elements of electronics] Elementy  
elektroniki. 1958. 135 p. (MIRA 12:8)  
(Electronics)

24(7)

AUTHOR:

Khomazyuk, V.G.

SOV/55-58-3-19/30

TITLE:

A new Method for the Determination of the Order of the Interference Bands (Short Note) (Novyy metod opredeleniya poryadka interferentsionnykh polos (Kratkoye soobshcheniye))

PERIODICAL:

Vestnik Moskovskogo universiteta, Seriya matematiki, mekhanika, astronomii, fiziki, khimii, 1958, Nr 3, pp 161-164 (USSR)

ABSTRACT:

The author proposes a method which allows the determination of the interference band order only with the aid of the spectro-interferograms for arbitrary refraction coefficients. Four plane parallel quartz plates with the approximate thicknesses 1.000, 0.999, 0.990 and 0.900 mm are needed only. The methods of I.V. Obreimov, D.V. Chepur, A.A. Shishlovskiy, I.S. Gorban' are also shortly indicated. There are 5 Soviet references.

ASSOCIATION:

Kafedra biofiziki (Chair of Biophysics)

SUBMITTED:

December 25, 1957

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24(4)

AUTHOR: Xhomazyrk, V.G.

SOV/55-58-4-20/31

TITLE: Application of a Biprism for the Determination of the Dispersion of Transparent Materials. Short Communication (Primeneniye biprizmy dlya opredeleniya dispersii prozrachnykh veshchestv)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya  
1958, Nr 4, pp 171-174

ABSTRACT: The author proposes a new interference method for the determination of refraction coefficients. With the aid of a biprism the light interference is generated from molten quartz; then a part of the interference beams is led through a plane parallel quartz plate, whereupon there appears a distortion of the spectro interferogram which is basic for the calculation of the coefficient. The usual deficiency of the method is the low light intensity; extraordinarily strong sources of light have to be used in order that the method can be applied successfully. An older method is that of I.V.Obreimov [Ref 1].  
There are 2 figures, and 2 Soviet references.

ASSOCIATION: Kafedra biofiziki (Chair of Biophysics)

SUBMITTED: February 7, 1957

Card 1/1

KHOMAZYUK, V.G.

Determining the order of interference bands by means of a mono-  
prism and a plate. Opt. i spektr. 8 no.2:261-263 P '60.

(MIRA 13:10)

(Interference (Light)  
(Spectrum analysis)

KHOMAZYUK, V.G.

Determining the refraction index of liquid media by interference methods. Biofizika 4 no. 6:749-754 '59. (MIRA 14:4)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.  
(REFRACTIVE INDEX) (INTERFEROMETRY) (LIQUIDS)

KHOMAZYUK, V.G.

Single-slit triple-beam interferometry. Opt. i spektr. 11  
no.3:417-419 S<sup>1</sup>61. (MIRA 14:9)  
(Interferometry)

37220

S/051/62/012/004/005/015  
E039/E485

24.3300

AUTHOR: Khomazyuk, V.G.

TITLE: The use of Fraunhofer diffraction for measuring the dispersion of light

PERIODICAL: Optika i spektroskopiya, v.12, no.4, 1962, 501-504

TEXT: Previous measurements of the dispersion of light by interferometric methods suffered from the disadvantage of low light intensity. The method described in this paper based on Fraunhofer diffraction has a simple mathematical basis and possesses maximum light intensity. The arrangement is as follows: Light from a slit S placed at the focus of a lens L produces a horizontal parallel beam of light which falls on a rectangular aperture in a vertical opaque screen, one half of which is covered by a plane parallel transparent plate. This plate introduces a path difference  $n$  expressed in wavelengths. The split beam is then focused on to a spectrograph slit Sp which is arranged at right angles to the slit S. In the experiment described the etalon plate is of quartz and it is immersed in distilled water. The refraction of the liquid can then be obtained with the Card 1/2

S/051/62/012/004/005/015  
E039/E485

The use of Fraunhofer ...

aid of the formulae

$$(n_{liq} - n)d = N\lambda \quad \text{or} \quad n_{liq} = n + N\frac{\lambda}{d}$$

where  $n_{liq}$  is the refraction of the investigated liquid,  $n$  is the refraction of the etalon plate,  $d$  its thickness and  $N$  the order of the interference bands corresponding to the wavelength  $\lambda$ . The combined spectrum and interference patterns are recorded photographically and because of the large light intensity, exposures from 10 sec down to 1/10-th sec are used. There are 2 figures.

SUBMITTED: March 15, 1961

Card 2/2

KHOMAZYUK, V.G.

Fresnel diffraction from a plane wave on the edge of a transparent  
plane-parallel plate. Vest. Mosk. un. Ser. 3: Fiz., astron. 16  
no.6:66-75 N-D '61. (MIRA 14:12)

1. Kafedra biofiziki biologo-pochvennogo fakul'teta Moskovskogo  
gosudarstvennogo universiteta.

(Diffraction)  
(Electromagnetic waves)

KHOMAZYUK, V.G.

Fraunhofer diffraction and its use for measuring light dispersion.  
Opt. i spektr. 7 no.4:501-504 Ap '62. (MIRA 15:5)  
(Diffraction) (Light--Scattering)



S/057/63/033/004/002/021  
B187/B102

AUTHOR: Khomazyuk, V. G.

TITLE: Fresnel diffraction on the edge of a transparent semi-plate of finite thickness

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 4, 1963, 382-386

TEXT: The general case of Fresnel diffraction (near field) is studied on the edge of a fully transparent semi-plane of finite thickness. Illustrations and some denotations are given in the figure. Owing to the transparency of the plate the entire xy plane is assumed as opening. The light passing through the plate is not attenuated, only a phase

difference  $\pi = \frac{\mu-1}{\lambda} d$  is observed where  $\mu$  is the refractive index for the plate and  $\lambda$  is the wavelength of light. The studies are based on an approximate expression for the interference  $\psi$  of the light and an expression for the light intensity  $I$  of the diffraction pattern is derived  $I = 4A^2 \left\{ \cos^2 \pi u + 2 [c^2(u) + s^2(u)] \sin^2 \pi n + [s(u) - c(u)] \sin^2 \pi n \right\}$ .

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S/057/63/033/004/002/021  
B187/B102

Fresnel diffraction on the ...

$A = \frac{1}{2} \exp(i\pi(\frac{t}{T} - \frac{r_0+r}{\lambda}))$  denotes a constant factor;  $T$  is the oscillation period;  $r_0$  and  $r$  are the distances of the coordinate origin from the light source  $Q$  and the point of observation  $P$ ;  $c(u)$  and  $s(u)$  are the Fresnel integrals;  $u$  is the transformed variable

$\frac{\pi}{2} u^2 = \frac{\pi}{\lambda} \frac{r_0 + r}{r_0 r} \xi^2 \cos^2 \varphi$ . The intensity in any point  $P$  of the

diffraction pattern is a function of the distances of the point corresponding to  $P$  on the Cornu spiral and their focal points with consideration of the phase shift  $2\pi n$  caused by the plate. In the above definite shape it is determined by the phase difference  $n$  and the distance of the corresponding point of the spiral from the center of the geometrical shadow ( $u = 0$ ) of the plate edge. For parallel beams

$A^2 = 1$  can be written without violating the generality. The formula then is in formal agreement with the results obtained by I. V. Obreimov (O prilozhenii Fresnelevoy difraktsii dlya fizicheskikh i tekhnicheskikh izmereniy, (On an application of the Fresnel diffraction in physical and

8/057/63/033/004/002/021  
B187/B102

Fresnel diffraction on the ...

technical measurements, Izd. AN SSSR, M.-L., 1945) (Mathematical publications) 1945). It is demonstrated that if the value corresponding to a parameter value  $u$  is interpreted correctly the Obreimov formula contains a sign error. There is 1 figure.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, Biologo-pochvennyy fakul'tet (Moscow State University, Division of Soil Biology)

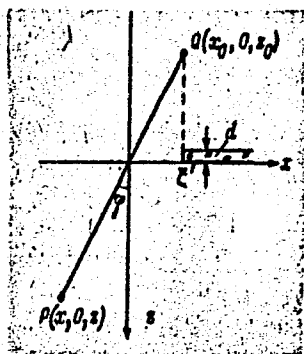
SUBMITTED: March 29, 1961 (initially)  
December 6, 1961 (after revision)

Card 3/4

Fresnel diffraction on the ...

S/057/63/033/004/002/021  
B187/B102

Figure



Card 4/4

BOCHKOV, N.P.; TSEYTLIN, P.I.; KHOMAZYUK, V.G.

Reviews. Biofizika 10 no.3:554-556 '65.

(MIRA 18:11)

33998

S/056/62/042/001/013/048  
B104/B102

24,1800 (1063, 1147, 1482)

AUTHORS: Bezuglyy, P. A., Galkin, A. A., Pushkin, A. I.,  
Khomchenko, A. I.

TITLE: Magnetoacoustic resonance in aluminum

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,  
no. 1, 1962, 84-86

TEXT: Single crystals (10 mm in diameter and 2 mm thick) were grown from aluminum, for which  $R_{4.2^{\circ}\text{K}}/R_{293^{\circ}\text{K}} = 6.7 \cdot 10^{-5}$ . Using a pulse technique (A. A. Galkin, A. P. Korolyuk. PTE, 6, 199, 1960), the dependence of the absorption coefficient for longitudinal ultrasonic waves of 200 Mc/sec on the magnetic field strength was studied at field strengths of up to 4000 oe and at 4.2°K. An ultrasonic crystal attenuator was interposed in addition to the specimen between the receiving and the emitting piezo-electric crystal in order to separate the acoustic pulses accurately. The ultrasonic wave vector was parallel to the [111] direction of the single crystal with a maximum error of 5°. The magnetic field was always perpendicular to the wave vector. The transmission coefficient was

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B104/B102

Magnetoacoustic resonance in aluminum

determined by a recorder as a function of the magnetic field strength. Two oscillation periods were detected in the inverse field:

$\nu\Delta H^{-1} \approx 6 \cdot 10^4 \text{ sec}^{-1} \text{ oe}^{-1}$  and  $\nu\Delta H^{-1} \approx 32 \cdot 10^4 \text{ sec}^{-1} \text{ oe}^{-1}$ . The anisotropy in the oscillation effects was examined, and three periods in an approximate ratio of 1:3:6 were established in a number of directions. The three different periods are attributed to the three electron groups with different effective masses, which have been detected by other scientists in testing aluminum with cyclotron resonance (D. N. Langenberg, T. W. Moore. Phys. Rev. Lett., 3, 137, 1959; E. Fawcett. Phys. Rev. Lett., 3, 139, 1959). In this way, the Fermi limiting velocities can be determined by a joint investigation of magnetoacoustic and cyclotron resonances. The results do not contradict W. A. Harrison's model of the Fermi surface of aluminum (Phys. Rev., 116, 555, 1959; 118, 1182, 1960; 118, 1190, 1960). A. F. Prikhod'ko, Corresponding Member AS UkrSSR, is thanked for having made work with liquid helium possible, E. I. Ponomarenko for having developed the high-sensitive receiver and for assistance in the measurements, and B. N. Aleksandrova for having prepared the high-purity aluminum. There are 1 figure and 10 references: 2 Soviet and

Card 2/3

33998

Magnetoacoustic resonance in aluminum

S/056/62/042/001/013/048  
B104/B102

8 non-Soviet. The four most recent references to English-language publications read as follows: B. W. Roberts. Phys. Rev., 119, 1889, 1960; T. Alsen, R. W. Morse. Bull. Amer. Phys. Soc., 4, 167. 1959; R. W. Morse, J. D. Gavenda. Phys. Rev. Lett., 2, 250, 1959; J. R. Neighbours, G. A. Alers. Phys. Rev. Lett., 3, 265, 1959.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of Low Temperatures of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: August 4, 1961

X

Card 3/3



KHOMCHENKO, A.I., inzh. (Riga)

Improved work organization in car maintenance and operation on  
the Baltic Railroad. Zhel. dor. transp. 46 no.8:76-78 Ag '64.  
(MIRA 17:11)

BEZUGLYY, P.A.; GALKIN, A.A.; PUSHKIN, A.I.; KHOMCHENKO, A.I.

Magnetoacoustic resonance in aluminum. Zhur.eksp.i teor.fiz.  
42 no.1:84-85 Ja '62. (MIRA 15:3)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN  
Ukrainskoy SSR.  
(Nuclear magnetic resonance and relaxation) (Aluminum)

KHOMCHENKO, G.P.

Coordinated teaching of chemistry in schools of secondary and  
higher education. Khim. v shkole 17 no.1:40-50 Ja-F '62. (MIRA 15:1)  
(Chemistry--Study and teaching)

KHOMCHENKO, G. P. Cand. Chem. Sol.

Dissertation: "A Study of the Polarization and Adsorption Characteristics of a Poisoned Platinized Platinum Electrode." Moscow Order of Lenin State U imeni M. V. Lomonosov, 26 Nov 47.

SO: Vechernyaya Moskva, Nov, 1947 (Project #17836)

*KHOMCHENKO, G.P.*

Chemical Abstr.  
Vol. 48 No. 6  
Mar. 25, 1954  
Electrochemistry

Electrochemical removal of poisons from a catalyst surface. G. P. Khomchenko and G. D. Vovchenko. ~~Vysokomol. Soedin.~~ *Moiten. Chem. Ser. Fiz.-Mat. i Khim. Nauk* No. 3, 117-20 (1953); cf. Shlygin and Frumkin, *C.A.* 30, 4008<sup>9</sup>. The state of the platinized Pt surface poisoned by As was followed by the detn. of the charging curves, while the poison was being gradually removed by anodic polarization. The resulting curves were shown. These indicated that the poisoned electrode could be substantially restored. The binding energy of adsorbed H attained its normal value characteristic of a nonpoisoned Pt surface.  
G. M. Kosolapoff

*Chem. Gen. Chemistry*

KHOMCHENKO, G.P.

Chemistry Department of the Moscow State University. Khim.v shkole  
10 no.3:74-78 My-Je '55. (MIRA 8:8)

1. Dotsent Moskovskogo gosudarstvennogo universiteta im. Lomonosova.  
(Chemistry) (Moscow University)

*Khomichenko, G. P.*

✓ Electrochemical study of the catalyst and the mechanism of catalytic hydrogenation. II. Hydrogenation of crotonaldehyde and butyraldehyde by the adsorbed layer of hydrogen on platinum. G. P. Khomichenko and G. D. Vovchenko. *Vestnik Mendeleeveva Inst. Khim. Ser. Fiz.-Mat. Estestven. Nauk* No. 6, 61-6 (1955); cf. *C.A.* 48, 3170g. The electrochem. methods of Shlygin (*C.A.* 46, 10074b; 49, 10102c, 12157d) were used to study the hydrogenation of  $\text{C}_4\text{H}_7\text{CHO}$  (I) and  $\text{MeCH}_2\text{CHCHO}$  (II) on platinized Pt in  $\text{N}_2\text{HCl}$  and  $\text{N}_2\text{H}_2\text{SO}_4$ . The fractions of the adsorbed H that were active and less active were for I in  $\text{HCl}$ , 31 and 20%; for I in  $\text{H}_2\text{SO}_4$ , 20 and 23%; for II in  $\text{HCl}$ , 43 and 30%; and for II in  $\text{H}_2\text{SO}_4$ , 31 and 26%, resp. The drop in pos. potential when the degassed electrode adsorbed I and II showed that I was more rapidly adsorbed and the dipoles were oriented with the neg. ends to the electrode. The increased H reactivity in  $\text{HCl}$  soln. was attributed to the increase in the binding energy of the adsorbed H from  $\text{H}_2\text{SO}_4$  in comparison with that from  $\text{HCl}$ . These energies were obtained from the charging curves. J. H. Scott

*Clear Gen. Chem.*

*DM*

KHOMCHENKO, G. P.

✓ The adsorption properties of the electrode catalyst in progressive poisoning. G. P. Khomchenko. *Uchenye Zapiski, Moscow, Gosudarst. Univ. im. M. V. Lomonosova* No. 174, 319-25 (1955).—Adsorption of acid from 1N NaCl + 0.01N HCl on platinized Pt was studied. The adsorption of an unpolluted electrode is proportional to the true surface. An electrode with an apparent area of 0.1 sq. cm. and a true area of 616,960 sq. cm. adsorbs about 16 micromoles of acid at a potential of +0.85 v. (relative to the H electrode) and -0.2 micromoles at 0 v. On progressive poisoning of the electrode with  $As_2O_3$  the quantity of adsorbed acid at pos. potentials decreased and may even become neg. at a high degree of poisoning (equiv. to 20% of the true surface). For adsorption of  $As_2O_3$  sufficient to cover 12.5% or more of the true surface, adsorption of acid attains a max. with increasing potential and then declines to zero or neg. values.  $As_2O_3$  poisoning affects adsorption by destruction of the double layer that exists at the interface between the electrolyte and imp. is the electrode. G. P. Khomchenko



RHOMCHENKO, G. P.

(Poison influence of mercury on adsorptive properties of the electrode catalysts) G. P. Rhomchenko, *Vestnik Mosk. Univ., Ser. Mat., Mekh., Astron., Fiz. i Khim.* 11, No 2, 176-8 (1956).—HgCl<sub>2</sub>, reduced with H<sub>2</sub> to Hg on the electrode, was used as poison of a platinized Pt electrode in N NaCl + 0.01N HCl. Measured was the amt. of adsorbed acid as function of potential, related to the normal H electrode. It was found that Hg, progressively poisoning the Pt electrode, shifts the zero potential to the cathode side. Contrary to the action of As, Hg increases the adsorptive capacity of the electrode with the potential movement to the anode. It is assumed that the phenomenon is caused by a polar bond between the atoms of the poison and of the electrode.  
E. Ryskevitch

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ABSTRACT, 1956, 1957

1. Kafedra obshchey khimii Moskovskogo gosudarstvennogo universiteta.  
(Electrolysis) (Catalysts) (Platinum)

KHOMCHENKO, G. P.

Change of electrochemical properties of the catalytic electrode with a progressive poisoning. G. P. Khomchenko. *Vestnik Moskov. Univ., Ser. Mat., Mekh., Astron., Fiz. i Khim.* 11, No. 2, 179-83 (1958).—The electrochem. behavior of the platinized Pt electrode was investigated as a function of its progressive poisoning with As and with Hg in a  $N$  NaCl + 0.01N HCl soln. A marked effect occurs when 2-2.5% of the electrode surface is covered with As or Hg. It consists of an increased potential of the  $H_2$  evolution. Oxidation occurs earlier on a poisoned electrode. The progressive poisoning with As causes a considerable decrease of the electrode capacity but at the same time a strong increase of the double-layer capacity. The Hg poisoning causes a decrease of both the electrode capacity and the double-layer capacity. The poisoning effect is smaller for electrolyte adsorption than for  $H$  adsorption. With the desorption of the poison, the adsorptive property of the electrode for the electrolyte and for  $H$  are reestablished. E. Ryshkevitch.

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1. Kafedra obshchey khimii Moskovskogo gosudarstvennogo universiteta.  
(Mercury) (Catalysts) (Electrode)

KHOMCHENKO, G.P. (Moskva)

Quantitative determination of the action of various catalysts.  
Khim.v shkole 11 no.5:58-59 S-0 '56. (MLRA 9:11)  
(Catalysts--Analysis)

*KHOMCHENKO, Gavriil Platonovich; VOVCHENKO, G.D., prof., red.; FLORIANOVICH, G.M., red.; GEORGIEVA, G.I., tekhn.red.*

KHOMCHENKO, Gavriil Platonovich; VOVCHENKO, G.D., prof., red.; FLORIANOVICH, G.M., red.; GEORGIEVA, G.I., tekhn.red.

[Manual of laboratory experiments in general chemistry] Laboratornyi  
praktikum po obshchei khimii. [Moskva] Izd-vo Mosk.univ., 1957. 181 p.  
(MIRA 10:12)

(Chemistry--Laboratory manual)

KHOMCHENKO, G. P.

Distr: 4E4j/4E2c(j)/  
4E2c

7  
V. An electrochemical study of catalysts and of the mechanism of catalytic hydrogenation. III. Hydrogenation of crotonaldehyde and butyraldehyde in the adsorption layer of hydrogen on palladium. G. P. Khomchenko and G. D. Vovchenko (State Univ., Moscow). Vestnik Mosk. Univ. Ser. Mat., Estn., Astron., Fiz., Khim. No. 3, 159-64 (1957); cf. C.A. 50, 9177g. — In contrast to Pt, a Pd catalyst is specific in that PrCHO is not hydrogenated in the adsorption layer of H, whereas crotonaldehyde (I) is hydrogenated as with Pt. On the catalyst 70% of the H was active, 0% slightly active, and 18% inactive; this revealed its heterodynamic catalytic nature. The adsorption capacity of PrCHO, I, and BuOH on the surface of a Pd electrode catalyst was detd. The curves of potential vs. time showed that these compds. had a dipole moment, and by their orientation on the catalyst surface when adsorbed I shifted the potential to the anode side, PrCHO and BuOH to the cathode first, then to the anode side. The possible electron reactions between the compds. and the catalyst are discussed.

Malcolm Anderson

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*Khimicheskaya*  
KHOMCHENKO, G.P. (Moskva)

The Mendeleev All-Union Chemical Society. Khim.v shkole 12  
no.5:32-36 S-O '57. (MIRA 10:10)  
(Russia--Chemical societies)

KHOMCHENKO, G.P.

Methods of PH determination ("Methods for determining the hydrogen-ion concentration" by E.N. Vinogradova. Reviewed by G.P. Khomchenko).  
Vest. Mosk. un. Ser. mat., mekh., astron., fiz. khim. 12 no.5:231-232  
'57. (MIRA 11:9)

(Hydrogen-ion concentration) (Vinogradova, E.N.)

KHOMCHENKO, G.P.

~~Use of~~ semimicromethods in practical exercises in chemistry. Khim.  
v shkole 13 no.3:26-34 My-Je '58. (MIRA 11:5)  
(Chemistry, Analytical--Quantitative)



5(4)

SOV/55-58-5-19/34

AUTHOR:

Khomchenko, G.P.

TITLE:

On the Relation of the Adsorption and Capacity Properties of a Platinum Electrode With Catalytic Effect (O sootnoshenii adsorbtsionnykh i yemkostnykh svoystv platinovogo elektroda-katalizatora)

PERIODICAL:

Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 5, pp 123 - 128 (USSR)

ABSTRACT:

In preceding papers of the author [Ref 1 - 3] the adsorption and capacity properties of a catalytically effecting electrode of platinized platinum were investigated. These properties are now compared with each other, whereby valuable indications to the mechanism of the potential formation on the boundary electrode-solution are obtained. The total potential jump could be decomposed into components and the influence of the double ionic layer as well as of the adsorbed gas on the potential formation could be cleared up. Poisoned as well as non-poisoned electrodes were investigated. Among others it was stated that for progressive poisoning arsenic diminishes the influence of the double ionic layer and increases the influence of the dipole atoms of the gas layers on the potential formation. Great arsenic

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On the Relation of the Adsorption and Capacity      SOV/55-58-5-19/34  
Properties of a Platinum Electrode With Catalytic Effect

quantities facilitate the sedimentation of the oxygen which in this case causes a change in charge of the double layer. The covering of great quantities of mercury on the electrode has nearly an inverse effect. The comparison carried out by the author has been undertaken for the first time by A.N. Frumkin and A.I. Shlygin [Ref 4].  
There are 4 Soviet references.

ASSOCIATION: Kafedra obshchey khimii (Chair of General Chemistry)

SUBMITTED: September 27, 1957

Card 2/2

5(4)

AUTHOR:

Khomchenko, G.P.

SOV/55-58-5-20/34

TITLE:

Investigation of the Adsorption and Capacity Properties of a Platinum Electrode With Catalytic Effect in an Alkalized Solution (Izucheniye adsorbtsionnykh i yemkostnykh svoystv platinovogo elektroda-katalizatora v podshchelochennom rastvore)

PERIODICAL:

Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 5, pp 129 - 132 (USSR)

ABSTRACT:

It is stated that in the considered case the adsorbed hydrogen and oxygen atoms are decisive for the jump formation of the potential on the boundary electrode-solution. The behavior of the non-poisoned electrode in an alkalized solution is the same as in an acidified solution in presence of arsenic which covers 2.5% of the electrode surface. There are 5 Soviet references.

ASSOCIATION: Kafedra obshchey khimii (Chair of General Chemistry)

SUBMITTED: May 9, 1958

Card 1/1

AUTHOR: Khomchenko, G.P., Dotsent 3-58-7-16/36

TITLE: The Fusion of Two Associated Subjects (Ob"yedineniye dvukh smezhnykh kursov)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 7, pp 55-56 (USSR)

ABSTRACT: The reorganization of study and redistribution of number of hours needed for teaching of associated disciplines of the geological faculty of Moscow University resulted in an economy of 30 % in time. It was possible to devote more time for practical lessons and, as a result, the level of student knowledge was raised. The author gives as an example the reorganization of the teaching of general chemistry and qualitative analysis. There is 1 Soviet reference.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (The Moscow State University imeni M.V. Lomonosov)

Card 1/1

KHOMCHENKO, G.P.

Summary of the Seventh Mendeleev Congress. Khim.v shkole 14  
no.4:88-91 J1-Ag '59. (MIRA 12:11)  
(Chemistry--Congresses)

AUTHOR: Khomchenko, G.P. S/055/59/000/04/024/026  
B004/B007

TITLE: The Eighth Mendeleev Congress on General and Applied Chemistry

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 4, pp 225-231 (USSR)

ABSTRACT: This congress took place in Moscow from March 16 - 23, 1959. The author gives a short survey of preceding Mendeleev congresses. At the eighth congress a total of 1500 lectures was delivered, among them 11 in the plenary sessions: Chairman of the Gosudarstvennyy Komitet Soveta Ministrov SSSR po khimii (State Committee of the Council of Ministers of the USSR for Chemistry), V.S. Fedorov: "Problems of Scientific and Technical Progress in the Chemical Industry"; Academician V.A. Kargin: "Fundamental Problems of the Chemistry of Polymers"; Academician A.N. Nesmeyanov: "The Periodic System of D.I. Mendeleev and Organic Chemistry"; Academician N.N. Semenov: "Fundamental Problems of Chemical Kinetics"; Academician V.I. Spitsyn: "The Present Stage of the Periodic Law of D.I. Mendeleev"; Academician A.P. Vinogradov: "Fundamental Problems of Radiochemistry"; Academician V.A. Engel'gardt: "Fundamental Problems of Biochemistry"; Professor A.V. Sokolov: "Chemical Problems of the Agriculture of the USSR"; V.B. Nikolayev: "The Most Important Tasks of Chemical Apparatus- and Machine Building"; Professor Ya.K.

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The Eighth Mendeleev Congress on General and  
Applied Chemistry

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Syrkin: "Fundamental Problems of the Theory of Chemical Bonds";  
Academician A.P. Aleksandrov: "The Chemical Aspects of Atomic  
Energy". At this congress, 17 sections, 19 subsections, the symposium  
on higher chemical and technological training, and the commission  
for nomenclature were in operation. In the Section of Inorganic  
Chemistry the lecture delivered by Academician V.I. Spitsyn on  
tasks of inorganic chemistry is mentioned in connection with the  
decisions taken by the 21st Congress of the CPSU. In this section  
there worked the subsections for physical-chemical analysis, for  
the chemistry of complex compounds, for problems of general chemistry  
and of technology. In the Section for Organic Chemistry and  
Technology, G.V. Uvarov, Deputy Chairman of the State Committee  
of the Council of Ministers of the USSR for Chemistry, spoke about  
the perspectives of the development of the industry of organic  
synthesis in the USSR during the period of from 1959 to 1965.  
Corresponding Member AS USSR, Holder of the Lenin Prize G.A.  
Razuvaev, dealt with the reaction of radical exchange. In this  
section 220 lectures were delivered. Section of Analytical Chemistry:  
Mention is made of the lecture delivered by Corresponding Member,  
AS USSR, I.P. Alimarin on the present problems of analytical chemistry.  
Section of Physical Chemistry: 100 lectures were delivered. Mention is

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The Eighth Mendeleev Congress on General and Applied Chemistry

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B004/B007

made of Academicians A.N. Terenin, M.M. Dubinin, A.A. Balandin, and Corresponding Member AS USSR Ya.I. Gerasimov. The subsections for the structure of matter, for the kinetics of chemical reactions, for catalysis, and for adsorption were in operation. The Section for Colloid Chemistry dealt with topical problems belonging to this field. In the Section for the Chemistry and Technology of Polymers, more than 80 lectures were delivered. In the Section for the Chemistry of Natural Compounds and of Biochemistry, about 100 lectures were delivered. Apart from joint meetings, also such of the subsection for biochemistry and the chemistry of natural compounds were held. Academician M.M. Shemyakin spoke about the development of the chemistry of natural compounds, Professor N.A. Preobrazhenskiy about Synthetic Research in the Field of Alkaloids. Academician A.I. Oparin spoke about fermentative processes in co-acervate drops. The Section of Agronomic Chemistry, Fertilizers, Insecticides and Fungicides held 4 meetings. Academician S.I. Vol'fkovich spoke about highly concentrated mixed fertilizers, Academician B.A. Arbuzov on phosphor-organic insecticides. In the Section for the Chemistry and Technology of Fuels, 60 lectures were delivered. Moreover, the following sections are mentioned: Chemistry and Technology of Food; Chemistry and Technology of Silicates (60

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The Eighth Mendeleev Congress on General and  
Applied Chemistry

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lectures); Radiochemistry and Chemistry of Isotopes; Theoretical and Applied Electrochemistry; Economy, Planning, and Organization of Chemical Plants; Fundamental Principles and Apparatus of Chemical Technology; Questions Relating to the History of Chemistry and Chemical Technology. In the Section Chemistry of Metals and Alloys, 50 lectures were held. Corresponding Member AS USSR, N.V. Ageyev, gave a survey of the investigation of metal systems in the USSR. In the final session of the Congress, Professor Dimitr Ivanov (Bulgaria) expressed the gratitude of the foreign scientists. Suggestions were submitted to the Presidium of the management of the Vsesoyuznoye khimicheskoye obshchestvo im. D.I. Mendeleeva (All-Union Chemical Society imeni D.I. Mendeleev) for the decision of problems relating to the convening of the next Congress, the establishment of a House of Chemistry in Moscow, the increase in the publication figures of chemical literature, new periodicals, and the establishment of new Institutes and the introduction of special fields.

Card 4/4

S/055/59/000/06/23/027  
B004/B002

AUTHORS: Khomchenko, G. P., Pletyushkina, A. I., Vovchenko, G. D.

TITLE: The Electrochemical Investigation of Catalysts and the Mechanism of Catalytic Hydrogenation. IV. Hydrogenation and Adsorption of Allyl Benzene on a Platinum Catalyst

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, No. 6, pp 186 - 193


TEXT: The authors used the method described in Refs. 1 and 2. On the electrode 0.2g of finely disperse platinum is deposited from a 2% solution of platinum chloride. The actual platinum surface was 15,000 cm<sup>2</sup>, the adsorption capacity of hydrogen was  $2.4 \cdot 10^{-5}$  gram-atoms, with 74% of the surface being covered by H<sub>2</sub>. The electrolyte used was 0.1 N H<sub>2</sub>SO<sub>4</sub>. Fig. 1 shows the reaction with 0.5 mole/l of allyl benzene. The potential shift is only low. Hence, only a fraction of the H<sub>2</sub> adsorbed on the electrode enters into reaction. If N<sub>2</sub> passes through the solution, the hydrogenation is accelerated due to more thorough mixing. After the occurrence of the steady potential, the hydrogen which did not enter into

Card 1/3

The Electrochemical Investigation of Catalysts  
and the Mechanism of Catalytic Hydrogenation.  
IV. Hydrogenation and Adsorption of Allyl Benzene  
on a Platinum Catalyst

S/055/59/000/06/23/027  
B004/B002


reaction by anode polarization was found to be 33.3% (Fig. 2). Only hydrogen with a low bond energy (up to 0.1 v) was reactive. At present, the role of the bond energy of hydrogen during hydrogenation is being investigated by the author by examining the influence of catalyst poisons. From the data of Figs. 1,2 the kinetics of the distance between  $H_2$  and catalyst during hydrogenation was determined. As shown by Fig. 3, hydrogen is irregularly linked with the electrode: 12.5% is in an active state and reacts quickly, 54.2% is less active, and 33.3% is inactive. The number of active centers of the catalyst was found to be  $0.9 \cdot 10^{18}$ . As to its reactivity, allyl benzene is therefore inferior to crotonaldehyde and butyric aldehyde (Ref. 1). The investigation of the electrolytic reduction of allyl benzene yielded a low reaction rate below the potential of the hydrogen electrode (Fig. 4). Only within the range of overvoltage it is more intensive. Fig. 5 shows the potential change in the adsorption of allyl benzene of different concentrations on the degasified catalyst. A comparison of electrolytic hydrogenation of the allyl benzene adsorbed on the catalyst (Fig. 6) (for results see Figs. 1,2) yields the kinetic curve of its adsorption, and of its hydrogenation rate (Fig. 7).



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The Electrochemical Investigation of Catalysts  
and the Mechanism of Catalytic Hydrogenation.  
IV. Hydrogenation and Adsorption of Allyl Benzene  
on a Platinum Catalyst

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B004/B002

Adsorption is much faster than hydrogenation and therefore cannot have a limiting effect. From the potential shift towards the anode it is concluded that allyl benzene is deposited at the positive ends of its dipole. The dipole moment  $\mu$  was  $0.1 \cdot 10^{-18}$  absolute electrostatic units. There are 7 figures and 3 Soviet references. 

ASSOCIATION: Kafedra obshchey khimii (Chair of General Chemistry)

SUBMITTED: May 25, 1959

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S/055/59/000/06/25/027  
B004/B002

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AUTHORS:

Tsintsevich, V. M., Khomchenko, G. P., Vovchenko, G. D.

TITLE:

Processes of Adsorption and Reduction of Butenediol<sup>1</sup> on a Platinum Catalyst

PERIODICAL:

Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, No. 6, pp. 205 - 209

TEXT: Experiments were conducted by means of an electrode of finely disperse platinum deposited on platinum. The actual surface of the electrode was 33,000 cm<sup>2</sup>.

The adsorption capacity of hydrogen was  $2.7 \cdot 10^{-5}$  gram-atoms in 0.1 N HBr, and 38% of the catalyst were covered with H<sub>2</sub>. Fig. 1 shows the course of the butenediol

adsorption on the degasified catalyst surface (Curve I), and the reduction of butenediol by means of the hydrogen layer adsorbed on the catalyst (Curve II). Assuming that the potential difference  $\Delta\varphi$  in the first approximation is proportional to the adsorption Fig. of butenediol molecules, the kinetic curve of the adsorption of organic substance was determined (Fig. 3, Curve I) by means of the charge curve of Fig. 2. The potential shift shows that butenediol is deposited on the electrode with the negative end of its dipole. The dipole moment  $\mu$  was

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found to be  $1.2 \cdot 10^{-18}$  absolute electrostatic units. The reduction course given in Fig. 3, curve II, shows that the adsorption and reduction rates differ but little, so that the former may have a limiting effect. Fig. 4 shows the reduction of butenediol by means of adsorbed hydrogen, and its electrolytic reduction. In both cases the H adsorbed enters into reaction. Fig. 4 shows that only 55% of the H adsorbed is strongly active (has a low binding potential), whereas 26% are less active and 19% inactive. The influence of catalyst poisons (As, Hg) on the course of reduction will be published later on. There are 4 figures and 5 Soviet references.

ASSOCIATION: Kafedra obshchey khimii (Chair of General Chemistry)

SUBMITTED: July 7, 1959

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KHOMCHENKO, G.P.; GRISHINA, T.M.; KRASNIKOVA, L.Ya.; PLETYUSHKINA, A.I.;  
TSINTSEVICH, V.M.; VOVCHEMKO, G.D.

Behavior of adsorbed hydrogen in reactions of hydrogenation of  
organic substances on platinum and rhodium electrodes-catalysts.  
Part 1. Vest. Mosk. un. Ser. 2: Khim. 15 no.5:39-46 S-O '60.  
(MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet, kafedra obshchey khimii.  
(Hydrogen) (Hydrogenation)

KHOMCHENKO, G.P.; GRISHINA, T.M.; KRASHNIKOVA, L.Ya.; PLETYUSIKINA, A.I.;  
TSINTSEVICH, V.M.; VOVCHENKO, G.D.

Behavior of certain organic substances in hydrogenation reactions  
on platinum and rhodium catalyst electrified. Vest. Mosk. un. Ser.  
2: Khim. 15 no.6:30-32 N-D '60. (MIRA 14:2)

1. Kafedra obshchey khimii Moskovskogo universiteta.  
(Hydrogenation) (Platinum) (Rhodium)



KHOMCHENKO, Gavril Platonovich; VOVCHENKO, G.D., prof., otv. red.;  
GOL'DENBERG, G.S., red.; GEORGIYEVA, G.I., tekhn. red.

[Laboratory manual in general chemistry and qualitative analysis  
with the use of the semimicro method] Praktikum po obshchei khi-  
mii i kachestvennomu analizu s primeneniem polumikrometoda.  
Izd.2., perer. i dop. Moskva, Izd-vo Mosk. univ., 1961. 391 p.  
(MIRA 14:8)

(Chemistry—Laboratory manuals)

S/076/61/035/001/022/022  
B004/B060

AUTHORS: Gerasimov, Ya. I., Kholler, V. A., Khomchenko, G. P.  
TITLE: Konstantin Grigor'yevich Khomyakov (on his 70th birthday)  
PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 1, 1961, 228-229

TEXT: This is an article written on the occasion of the 70th birthday of K. G. Khomyakov, Professor, Doctor of Chemistry, on January 1, 1961. Khomyakov's scientific activity has always been connected with the Moskovskiy gosudarstvennyy universitet (Moscow State University). In 1915, when still a student, he collaborated with V. V. Razumovskiy on problems of defense. In the following year he worked as a chemist at the factory, in which the results of those studies were put into practice. After the revolution, the terrain of that factory was used for the construction of the first Scientific Research Institute of Applied Chemistry, at whose central laboratory Khomyakov worked for 12 years. In 1917, Khomyakov graduated from the khimicheskoye otdeleniye fiziko-matematicheskogo fakul'teta MGU (Chemical Department of the Division of Physics and Mathematics of Moscow State University), and, on a suggestion by

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Konstantin Grigor'yevich Khomyakov ...

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Professor I. A. Kablukov remained at the University, where he worked at the thermokhimicheskaya laboratoriya im. V. F. Luginina (Thermochemical Laboratory imeni V. F. Luginin). In 1919, on Professor M. M. Popov's advice, he started with lectures of chemistry at the Rabochiy fakul'tet (Workers' Division) of the Moscow State University. As of 1930, he became concerned with industrial problems, e.g., when commissioned by the Institut udobreniy (Institute of Fertilizers) in collaboration with M. M. Popov, P. K. Shirokikh, N. N. Fedos'yev, and S. F. Yavorskaya on phosphates, and also on the catalytic synthesis of Synthol. He was awarded the D. I. Mendeleev Prize for this activity. In 1934, Professor Khomyakov began with the study of the kinetics of dissociation of carbonates and the dehydration of crystal hydrates. This study was the basis on which he built his dissertation for a doctor's degree "Study of the transformation of solid phases under formation of a new solid phase and of gas". As from 1943, Khomyakov has been supervising the kafedra obshchey khimii (Department of General Chemistry) of the Chemical Division of Moscow State University. Under his guidance, studies were conducted (using calorimetric methods of continuous adiabatic electric heating) on transformations in metal and salt systems in the solid state (with V. A. Kholler, M. Ye. Levina,

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Konstantin Grigor'yevich Khomyakov ...

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V. A. Troshkina), on synthesis of zinc phosphide (with N. V. Karvyalis), on the kinetics of the decomposition of molybdenum and tungsten peroxides (with G. V. Kosmodem'yanskaya), as well as (with I. A. Zaydenman) on the primary phase of the formation of Synthol from CO and H<sub>2</sub>; furthermore, studies of the magnetic alloys Fe-Ni-Al and Fe-Co-Al (with V. A. Troshkina and Yu. D. Tret'yakov). Starting in 1956, Khomyakov has been conducting studies on the chemistry and the physics of ferrites. Mention is made of the study of multicomponent systems of salts of the schoenite type (with M. I. Ozerova and Yu. D. Tret'yakov), the specific heat of ferrites (with L. A. Reznitskiy), the valence states of cations in ferrites (with V. A. Kholler and A. I. Pavlova-Verevkina). Khomyakov is at present holding lectures on physicochemical analyses. The first volume of his book "Lektsii po obshchey khimii" (Lectures on General Chemistry) was published in 1957, and the second volume has now gone to the press. Khomyakov has been decorated with the Lenin Order. There is 1 figure.

Card 3/3

SEMENOVA, A.D.; KHOMCHENKO, G.P.; PLETYUSHKINA, A.I.; VOVCHENKO, G.D.

Reduction and electroreduction of organic substances on a  
platinized platinum. Part 1: Behavior of allylbenzene, propenyl-  
benzene, and  $\alpha$ -methylstyrene on a surface of platinum electrode.  
Vest.Mosk. un. Ser.2:khim. 17 no.1:49-54 Ja-F '62. (MIRA 15:1)

1. Moskovskiy gosudarstvennyy universitet, kafedra obshchey khimii.  
(Benzene) (Styrene) (Electrodes, Platinum)

SEMENOVA, A. D.; KHOMCHENKO, G. P.; VOVCHENKO, G. D.

Reduction and electroreduction of organic substances on  
platinized platinum. Part 2: Effect of the composition of  
electrolyte on the catalytic reduction of allylbenzene. Vest.  
Mosk. un. Ser. 2: Khim. 16 [i.e.17], no.6:51-54 N-D '62.  
(MIRA 16:1)

1. Kafedra obshchey khimii Moskovskogo universiteta.

(Benzene) (Reduction, Electrolytic)

GRISHINA, T.M.; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Electrochemical investigation of rhodium and osmium catalyst-  
electrodes. Report No.1. Vest.Mosk.un.Ser.2: Khim. 17  
no.2:53-56 ~~Mar~~-Apr '62. (MIRA 15:4)

1. Kafedra obshchey khimii Moskovskogo universiteta.  
(Electrodes, Rhodium) (Electrodes, Osmium) (Electrochemistry)

TSINTSEVICH, V.M.; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Influence of the structure of organic substances on their reduction  
and adsorption. Vest.Mosk.un. Ser.2:Khim. 18 no.1:27-31 Ja-F  
'63. (MIRA 16:5)

1. Kafedra obshchey khimii Moskovskogo universiteta.  
(Chemical structure) (Reduction, Electrolytic)



GRISHINA, T.M.; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Electrochemical study of rhodium and osmium electrode-catalysts.  
Part 2: Effect of poisoning on the capacity of rhodium electrode.  
Vest.Mosk.un. Ser.2:Khim. 18 no.1:48-51 Ja-F '63. (MIRA 16:5)

1. Kafedra obshchey khimii Moskovskogo universiteta.  
(Electrodes, Rhodium)

STOYANOVSKAYA, T.N.; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Behavior of the ruthenium electrode during deep anodic polarisation.  
Vest.Mosk.un.Ser.2:Khim. 18 no.2:20-21 Mr-Apr '63. (MIRA 16:5)

1. Kafedra obshchey khimii Moskovskogo universiteta.  
(Electrodes, Ruthenium) (Polarization (Electricity))

S/189/63/000/001/005/008  
D204/D307

AUTHORS: Tsintsevich, V. M., Khomchenko, G. P. and Vovchenko, G. D.

TITLE: The effect of the structure of organic compounds on their reduction and adsorption

PERIODICAL: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 1, 1963, 27-31

TEXT: The reduction and adsorption properties of butynediol-1,4 (I), tetramethylbutynediol-1,4 (II) and 1,4-dimethyl-1,4-diethylbutynediol (III) were studied in 0.1N  $H_2SO_4$ , using a platinized Pt electrode which also served as a catalyst (true surface  $17000\text{ cm}^2$ ). 83% of the electrode surface was covered with atomic hydrogen. It was found that the rates of catalytic reduction of I, II and III in the adsorption layer of hydrogen and of electroreduction decreased in the order  $I > II > III$ . The rates of electroreduction were very low but increased rapidly as the electrode potential became less positive (i.e. with a decrease in the adsorption potential

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The effect of the ...

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D204/D307

of hydrogen). Adsorption of I, II, and III on degassed electrode, at 0.6 V, and reaction with atomic hydrogen showed that both the adsorption ability and reactivity w.r.t. hydrogen decreased in the order  $I > II > III$ . There are 7 figures and 2 tables.

ASSOCIATION: Kafedra obshchey khimii (Department of General Chemistry)

SUBMITTED: May 22, 1961

Card 2/2

KHOMCHENKO, Gavriil Platonovich; KOROBTSOVA, N.A., red.;  
YERMAKOV, M.S., tekhn. red.

[Handbook on chemistry for students entering institutions of higher learning] Posobie po khimii dlia postupaiushchikh v vuzy. Moskva, Izd-vo Mosk. univ., 1963.  
279 p. (MIRA 16:11)  
(Chemistry--Handbooks, manuals, etc.)

GRYSHINA, T.M.; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Comparison of the rates of the catalytic reduction and electrolytic reduction of some organic substances on rhodium. Part 3. Vest.Mosk. un. Ser.2: Khim. 18 no.4:55-58 JI-Ag '63. (MIRA 10:9)

1. Kafedra obshchey khimii Moskovskogo universiteta.  
(Catalysis) (Reduction, Electrolytic)  
(Electrodes, Rhodium)

STOYANOVSKAYA, T.N.; KHOMCHENKO, G.P.; PLETYUSHKINA, A.I.; VOVCHENKO, G.D.

Determination of the true surface of a ruthenium electrode-catalyst.  
Vest.Mosk.un. Ser.2:Khim. 18 no.6:50-51 N-D '63. (MIRA 17:4)

1. Kafedra obshchey khimii Moskovskogo universiteta.

GRISHINA, T.M.; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Mechanism of electroreduction of some organic substances on  
rhodium. Part 4. Vest.Mosk.un. Ser.2:Khim. 18 no.6:52-54  
N-D '63. (MIRA 17:4)

1. Kafedra obshchey khimii Moskovskogo universiteta.



KHOMCHENKO, G.P., obshchestvennyy dekan

[Lectures by chemists] Rasskazyvaiut uchenye-khimiki.  
Moskva, Izd-vo "Nauka," 1964. 254 p. (MIRA 17:5)

1. Akademiya nauk SSSR. 2. Khimicheskii fakul'tet Narodnogo  
universiteta pri Moskovskom gosudarstvennom universitete.

KRASNIKOVA, L. Ya; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Effect of arsenic on the catalytic and electrolytic reduction  
of crotonic and maleic acids on platinum. Vest. Mosk. un. Ser.  
2 Khim. 19 no.2:33-36 Mr-Apr'64 (MIRA 17:6)

1. Kafedra obshchey khimii Moskovskogo universiteta.

BOGDANOVSKIY, G.A.; KHOMCHENKO, G.P.; VOVCHENKO, G.D.

Adsorptive capacity of some platinoïds toward hydrogen at different  
pH values. Vest.Mosk.un.Ser.2:Khim. 19 no.4:35-38 J1-Ag '64.  
(MIRA 18:8)

1. Kafedra obshchey khimii Moskovskogo universiteta.

KHOMCHENKO, G.P.; STOYANOVSKAYA, T.N.; VOVCHENKO, G.D.

Reactions of hydrogenation and electrohydrogenation of some organic substances on a ruthenium electrode-catalyst. Zhur. fiz. khim. 38 no.2:434-438 F '64. (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.